

# Discipline



## DEFINITION

<i>Name</i>	Data Management
<i>Description</i>	<p>Data Management is the formulation and implementation of policies, standards, procedures, practices and processes that enable data to be used effectively without regard to platform. It includes the control of data handling operations--such as acquisition, analysis, translation, coding, storage, retrieval, and distribution of data. As well it provides access to data, performs or monitors the storage of data, and controls input/output operations. Through this discipline the roles, standards, and technologies for data definition, design, management, and administration as a recognized enterprise-wide resource will be defined. The Data Management discipline provides a process-independent view of all enterprise-wide data stored and housed in a manner that enables Knowledge Management and Application Engineering while adhering to all designated Security and Privacy requirements.</p>
<i>Rationale</i>	<p>A fundamental building block of the Missouri Adaptive Enterprise Architecture is data. The quality of Missouri's information is largely dependent on the quality of the underlying data. Application systems have historically been developed independently from each other. Most do not share any logic or data across system or organizational boundaries. The majority of the data was designed for access by a single application system within a single agency, not for access outside the application system.</p> <p>The Data Management discipline addresses the need for high-quality, consistent data in support of the business functions of the State of Missouri. It requires that the data be accurate and easily accessible. It provides standards and guidelines for accessing data for decision support and analytical processing. The life cycle of data begins with data entry, continues through transactional, operational and decision support, and ends with obsolescence and/or archival of data. Structuring and controlling the definition of data will ensure its consistent use in and across the state. By the application of good Data Management practices, the quality of the data (and thus of the information which results from it) is improved. The mechanism for achieving this goal is predefined, meaningful, data items that are clearly understood by all information systems. This will reduce the difficulty of exchanging data and information including data designs, reduce retraining requirements, and foster a common approach to Data Management within the state. By promoting the concept of federated data, the state will benefit in the areas of reuse, accuracy, security and currency thus making the data more shareable than the historic model.</p>
<i>Benefits</i>	<p>Timely, accurate and relevant information drawn from across the enterprise is vital in the decision making process, allowing maximum use to be made of limited resources. Data Management systems should be implemented in adherence with all security, confidentiality and privacy policies and applicable statutes. This will help to safeguard confidential and proprietary information, enhance public trust, enhance the proper stewardship over public information, and help ensure the integrity of the information. Adhering to common data standards, agencies will be able to: collect</p>

	<p>data once and use it often; warehouse data more effectively for various needs; and, better protect the privacy of individuals while improving access to non-restricted information. The benefits of such activities include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Promotes data standardization.</li> <li>• Reduces unintended redundancy of data.</li> <li>• Helps identify global data.</li> <li>• Recognizes data as a valuable resource and enables reuse.</li> <li>• Develops and enforces standards to ensure consistency across applications and platforms.</li> <li>• Enables more efficient use of data storage.</li> <li>• Helps maintain accuracy, consistency and appropriate use of the data.</li> <li>• Increases and maintains the data's stability, integrity, reliability, and relevance.</li> <li>• Ensures data availability (users can get to the data when it's needed)</li> </ul>	
<b>BOUNDARY</b>		
<i>Boundary Limit Statement</i>	<p>Data Architecture defines all the components, interfaces and processes for implementing and managing an integrated, cohesive data policy. These components include a logical data dictionary, development and adoption of data standards and security procedures and protocols, as well as the conceptual and logical design and modeling of the data. This includes such things as data types (i.e. text, numeric, multimedia, etc.), image data, as well as processes such as normalization.</p>	
<b>ASSOCIATED ARCHITECTURE LEVEL</b>		
<i>List the Domain Name</i>	Information	
<b>CRITICAL REFERENCES</b>		
<b>Related Domains/Disciplines</b>		
<input type="checkbox"/> Interface – Branding	<input checked="" type="checkbox"/> Integration – Functional Integration	<input checked="" type="checkbox"/> Systems Mgt – Business Continuity
<input type="checkbox"/> Interface – Access	<input type="checkbox"/> Integration – Middleware	<input type="checkbox"/> Security – Managerial Controls
<input type="checkbox"/> Interface – Accessibility	<input checked="" type="checkbox"/> Application – Application Engineering	<input checked="" type="checkbox"/> Security – Technical Controls
<input checked="" type="checkbox"/> Information – Knowledge Mgt	<input type="checkbox"/> Application – Electronic Collaboration	<input type="checkbox"/> Security – Operational Controls
<input checked="" type="checkbox"/> Information – Data Mgt	<input type="checkbox"/> Systems Mgt – Asset Mgt	<input type="checkbox"/> Privacy – Profiling
<input checked="" type="checkbox"/> Information- GIT	<input checked="" type="checkbox"/> Systems Mgt – Change Mgt	<input type="checkbox"/> Privacy – Personification
<input type="checkbox"/> Infrastructure - Network	<input type="checkbox"/> Systems Mgt – Console/Event Mgt	<input checked="" type="checkbox"/> Privacy – Privacy
<input type="checkbox"/> Infrastructure - Platform	<input type="checkbox"/> Systems Mgt – Help Desk/Problem Mgt	
<b>Standards Organizations/Government Bodies</b>		
<i>List Standards Organizations</i>	<p>Standards exist for programming languages, operating systems, data formats, communications protocols, and user interfaces. Most official computing standards are set by one of the following organizations:</p> <ul style="list-style-type: none"> <li>• <b>ANSI</b> (American National Standards Institute) <a href="http://www.ansi.org">www.ansi.org</a></li> <li>• <b>IEEE</b> (Institute of Electrical and Electronic Engineers) <a href="http://www.ieee.org">www.ieee.org</a></li> <li>• <b>ISO</b> (International Standards Organization) <a href="http://www.iso.ch">www.iso.ch</a></li> <li>• <b>FGDC</b> (Federal Geographic Data Committee) <a href="http://www.fgdc.gov">www.fgdc.gov</a></li> <li>• <b>GOS</b> (Geospatial One Stop) <a href="http://www.geo-one-stop.gov/Standards">www.geo-one-stop.gov/Standards</a></li> </ul>	

<i>List Government Bodies</i>	
<b>Stakeholders/Roles</b>	
<i>List Stakeholders</i>	
<i>List Roles</i>	
<b>Discipline-specific Technology Trends</b>	
<i>List Discipline-specific Technology Trends</i>	Development and evolution of XML data schemas Integration of geospatial elements of data Integration of multimedia data types Standardizing and Automating Remote File Distribution Storing of large object types within databases (Blob, Clob, etc.) Increased focus on security and privacy issues
<i>Technology Trend Source</i>	eWeek – The Enterprise Newsweekly ( <a href="http://www.eweek.com">www.eweek.com</a> ) Database Trends and Applications ( <a href="http://www.dbta.com">www.dbta.com</a> ) ZJournal ( <a href="http://www.zjournal.com">www.zjournal.com</a> ) Oracle Magazine ( <a href="http://www.oracle.com/oraclemagazine">www.oracle.com/oraclemagazine</a> ) SQL Server Home ( <a href="http://www.microsoft.com/sql">www.microsoft.com/sql</a> ) DB2 Magazine ( <a href="http://www.db2mag.com">www.db2mag.com</a> ) IDUG Solutions Journal ( <a href="http://www.idug.org">www.idug.org</a> ) <a href="http://www.Techtarget.com">www.Techtarget.com</a> AS400 ( <a href="http://www.Search400.com">www.Search400.com</a> ) AS400 ( <a href="http://www.news400.com">www.news400.com</a> ) IDMS User Association ( <a href="http://www.iua.com">www.iua.com</a> ) Government Enterprise Government Technology InformationWeek Computer World ( <a href="http://www.computerworld.com">www.computerworld.com</a> ) Computer Magazine <a href="http://www.networkcomputing.com">www.networkcomputing.com</a>
<b>ASSOCIATED COMPLIANCE COMPONENTS</b>	
<i>List Discipline-level Compliance Components</i>	
<b>METHODOLOGIES</b>	
<i>List methodologies followed.</i>	
<b>DISCIPLINE DOCUMENTATION REQUIREMENTS</b>	
<i>Provide documentation requirements for this Discipline.</i>	<b>Application – Application Engineering</b> If development methodologies, standards or technologies change that define how applications are designed this could change the standards and technologies for data management and administration. <b>System Mgt. – Change Mgt.</b> If technologies for version control and deployment of IT assets change, that may affect the compatibility of the current Knowledge Management components.

	<p><b>System Mgt. – Business Continuity</b>          If disaster recovery components change that would directly affect Data Management.</p> <p><b>Integration – Functional Integration</b>          In integrating separately produced components or subsystems, the solutions to problems involving their compatibility can be addressed through principles of data management and standards.</p> <p><b>Privacy - Privacy</b>          Impact on protecting data and the rights of data owners; Data Security</p> <p><b>Security – Technical controls</b>          A significant part of the Data Management discipline is defined as “the formulation and implementation of policies, standards, procedures, practices and processes.” Security Technical controls are partially defined as “security controls executed by computer systems.” Data Management will interrelate with the Security technical controls in that its’ policies and standards will need to address the corresponding Security technical controls and vice versa. The combination of the two domains should also address the issue of security levels within the data itself in addition to authentication.</p>		
<b>ASSOCIATED TECHNOLOGY AREAS</b>			
<i>List the Technology Areas associated with this Discipline.</i>	<ul style="list-style-type: none"> <li>• Logical Data Dictionary</li> <li>• Data Standards</li> <li>• Data Security</li> <li>• Conceptual – Logical Design and Modeling</li> </ul>		
<b>CURRENT STATUS</b>			
<i>Provide the Current Status</i>	<input type="checkbox"/> <i>In Development</i> <input type="checkbox"/> <i>Under Review</i> <input checked="" type="checkbox"/> <i>Approved</i> <input type="checkbox"/> <i>Rejected</i>		
<b>AUDIT TRAIL</b>			
<i>Creation Date</i>	4-12-2004	<i>Date Approved/Rejected</i>	5-11-04
<i>Reason for Rejection</i>			
<i>Last Date Reviewed</i>		<i>Last Date Updated</i>	
<i>Reason for Update</i>			